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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,147	04/01/2004	Richard L. McClellan	040193	9009
41835	7590	03/16/2010		
K&L GATES LLP HENRY W. OLIVER BUILDING 535 SMITHFIELD STREET PITTSBURGH, PA 15222			EXAMINER DANNEMAN, PAUL	
			ART UNIT	PAPER NUMBER
			3627	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/816,147	<b>Applicant(s)</b> MCCLELLAN ET AL.	
	<b>Examiner</b> PAUL DANNEMAN	<b>Art Unit</b> 3627	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 December 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### Response to Amendment

1. Claims 1, 13, 15 and 19-23 have been amended
2. Claims 1-23 are pending and have been examined in this Office Action.

### Response to the Arguments

3. Applicant argues with respect to independent Claims 1 and 19-23 that ***“it can be seen that both the supplier’s inventory and the customer’s inventory are monitored in accordance with each of the independent claims. This dual monitoring of both the inventory at a supplier workplace, as well as the inventory at a customer workplace, provides significant advantages over Salvo. In particular, the supplier is able to manage inventory with knowledge of the whole supply chain, i.e., by knowing the inventory (and hence predictable demand) of the customer, as well as knowing the current inventory at a supplier workplace...In contrast to the pending claims, Salvo does not teach, disclose or suggest monitoring inventory both ‘at a first monitored location at a supplier workplace’ and ‘at a second monitored location at a customer workplace,’ as recited in claim 1, for example.”*** Respectfully, the Examiner must disagree. Salvo in at least Column 2, lines 57-67 and Column 3, lines 1-22 discloses a system and method for inventory management, in particular, **vendor-managed inventory**. The system and method provide information concerning inventory amounts and inventory ordering to a manufacturing site and an inventory vendor. Salvo in at least Column 3, lines 41-67 and Column 4, lines 1-2 discloses that the inventory management system monitors a manufacturing site and interacts with a control which interacts with the vendor manufacturing schedules, and an inventory track device for monitoring in-transit inventory. Salvo in at least Column 9, lines 33-57 further discloses that the inventory management system 100 can be vendor controlled (vendor-managed inventory) thereby increasing interaction between the manufacturing site and vendors. Salvo in at least Column 10, lines 9-26 further discloses that the inventory management system can rely on appropriately developed inventory policies for the benefit of another inventory management system 100. Therefore, it would have been obvious, at the time of the invention, to one of ordinary skill that Salvo discloses an

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inventory management system which can be implemented as “a vendor managed inventory system”, “a manufacturer managed inventory system”, and a “jointly managed inventory system” to manage the inventory chain.

4. Applicant's other arguments are directed to the features as amended and are moot as a new grounds of rejection is being entered.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. **Claims 1 and 19-23** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims recite ***“...respective compositions of the inventory material are associated with a product identifier and a container identifier.”*** However, the Examiner is unable to find any support in applicant's specification regarding associating a product identifier and a container identifier with the composition of the inventory material. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

7. **Claims 1-14 and 19-23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Salvo et al., US 6,341,271 B1 hereafter known as Salvo and further in view of Hardway, Jr., US 3,774,237 hereinafter known as Hardway and further in view of Mowery, US 5,983,198 A.

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**Claims 1, 2, 3, 19, 20, and 21:**

With regard to the limitations:

- ***Measurement instrument sending signal representing amount and composition of the inventory in a container located at the supplier's and customer's location,***
- ***Wherein the generated data signals representative of the respective compositions of the inventory material are associated with a product identifier and a container identifier.***
- ***Telemetry unit to send data from a measurement instrument located on each monitored container.***
- ***A monitoring mail server receiving signal from Telemetry unit and converting it to inventory information.***
- ***An inventory management server receiving from monitoring mail server inventory information for presentation on website,***

Salvo in at least Column 2, lines 57-67 and Column 3, lines 1-7 discloses an vendor-inventory managed system which has at least one storage receptacle for storing inventory, at least one amount indicator to determine the inventory in each receptacle, each amount indicator generating inventory amount signals representative of inventory amounts in the receptacle and a site controller 112 (Salvo, Column 4, lines 59-67 and Fig.1) that receives signals from the amount indicators and forwards the signals to the control unit 114 (Salvo, Column 5, lines 1-10) and converts the signals to determine the amount of inventory in each receptacle. Salvo in at least Column 5, lines 11-20 further discloses that the signals transmitted in the inventory management system may be either hardwired or wireless Ethernet signals and wireless Internet and web signals as well as other wireless connections. Salvo in at least Column 2, lines 57-61 discloses a system and method for vendor-managed inventory which provide information concerning inventory amounts and inventory ordering to a manufacturing site and an inventory vendor. Salvo in at least Column 3, lines 8-22 further discloses that the inventory management method provides inventory amounts and inventory ordering to a manufacturing site, an inventory vendor, or both.

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Salvo in at least Column 9, lines 33-57 further discloses that the inventory management system 100 can be vendor controlled (vendor-managed inventory) thereby increasing interaction between the manufacturing site and vendors.

Salvo in at least Column 10, lines 9-26 further discloses that the inventory management system can rely on appropriately developed inventory policies for the benefit of another inventory management system 100. Therefore, it would have been obvious, at the time of the invention, to one of ordinary skill that Salvo discloses an inventory management system which can be implemented as “a vendor managed inventory system”, “a manufacturer managed inventory system”, and a “jointly managed inventory system”.

Salvo does not specifically disclose that the signals received from the measurement instruments (sensors) are directly related to the composition of the material stored in the container, however Salvo in at least Column 4, lines 31-67 discloses that the amount indicator 108 comprises a level sensor, a weight indicator, a volume analyzer, humidity, temperature, density of the material and other devices that permit determination of the amount of inventory in a receptacle using various technologies.

Salvo in at least Column 10, lines 48-61 discloses that the inventory management system 100 uses identification codes such as bar codes which enables identifying the location and identification of individual inventory orders stored at the manufacturing site, inventory in transit from the vendor to the manufacturing site, inventory in receptacles and inventory being processed.

However, Hardway in at least Column 1, lines 4-22 discloses a sensor for determining the ingredients ratio of a material such as cereal and food grains, crude oil, and pipeline petroleum products or by-products. Hardway in at least Column 12, lines 44-67 and Column 13, lines 1-4 further discloses that the same sensor may be used to measure the level and type of material in a tank container. Therefore, it would have been obvious, at the time of the invention, to one of ordinary skill to combine the well known sensor elements of Salvo for measuring the level of material and Hardway's sensor for measuring the level and composition of material in a container

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as the combination would yield the same predictable results of measuring the level and composition of material in a container.

- ***Wherein the inventory management server is configured to process the generated data signals representative of the respective compositions of the inventory material to preserve use of at least one container for containing only one type or certain types of inventory material.***

The combination of Salvo and Hardway discloses the limitation of the processing of the data signals which represent the respective compositions of the inventory material as disclosed above; however Salvo and Hardway do not specifically address the limitation of preserving the use of one container for only one type or certain types of inventory material. However, Mowery in at least Column 1, lines 61-64 and Column 7, lines 34-56 discloses the use of a dedicated fleet of delivery vehicles to eliminate the tank truck washings and the associated waste disposal typical of non-dedicated fleets while maintaining a minimum level of inventory in the storage containers. Therefore, it would have been obvious, at the time of the invention, to one of ordinary skill to modify the Salvo/Hardway combination with Mowery's dedicated fleet of delivery vehicles and to further modify the combination of Salvo/Hardway/Mowery to include dedicated storage containers, with the motivation to minimize the creation of waste due to vehicle and container washing, which must be properly disposed.

**Claim 4:**

With regard to the limitation:

- ***Container is one of a tank, bin, silo, vessel and storage arrangement.***

Salvo in at least Column 4, lines 12-22 discloses that the receptacles are any appropriate storage device, such as, but not limited to, a silo, storage bin, hopper, and bag, and combinations thereof.

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**Claims 5 and 6:**

With regard to the limitations:

- ***Inventory material is one of a gas, liquid, aging product, food product, fabricated component, hardware, raw material and physical good.***
- ***Measurement instrument is one of a Thermocouple, Ultrasonic Sensor, pressure sensor, sound sensor, or radar sensor.***

Salvo does not specifically disclose the type of inventory material, per se. However, Salvo in at least Column 4, lines 31-44 discloses that the amount indicator used to provide signals indicative of an inventory amount includes a level sensor, weight indicator, volume analyzer, and other devices that permit determination of the amount of inventory in a receptacle. Furthermore the indicators may also measure amount influencing variables, such as, humidity and temperature. Salvo, in at least Column 4, lines 45-58 further discloses that the indicators may include ultrasonic and ultrasound level detectors, optical sensors, laser amount sensing detection, nuclear amount sensing detectors, load cells and other devices capable of detecting amounts.

**Claim 13:**

With regard to the limitations:

- ***Wherein inventory information is one of material identity, material composition container level, inventory amount, inventory temperature, inventory flow rate, specific gravity, moisture content, weight, container specifications, network specifications, usage information, delivery information, user information and workplace information.***

Salvo does not specifically disclose the type of inventory material, per se. However, Salvo in at least Column 4, lines 31-44 discloses that the amount indicator used to provide signals indicative of an inventory amount includes a level sensor, weight indicator, volume analyzer, and other devices that permit determination of the amount of inventory in a receptacle using various technologies. Furthermore the indicators may also measure amount influencing variables, such



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as, humidity and temperature. Salvo, in at least Column 4, lines 45-67 further discloses that the indicators may include ultrasonic and ultrasound level detectors, optical sensors, laser amount sensing detection, nuclear amount sensing detectors, load cells and other devices capable of detecting amounts.

Salvo in at least Column 10, lines 48-61 discloses that the inventory management system 100 uses identification codes such as bar codes which enables identifying the location and identification of individual inventory orders stored at the manufacturing site, inventory in transit from the vendor to the manufacturing site, inventory in receptacles and inventory being processed.

However, Hardway in at least Column 1, lines 4-22 discloses a sensor for determining the ingredients ratio of a material such as cereal and food grains, crude oil, and pipeline petroleum products or by-products. Hardway in at least Column 12, lines 44-67 and Column 13, lines 1-4 further discloses that the same sensor may be used to measure the level and type of material in a tank container. Therefore, it would have been obvious, at the time of the invention, to one of ordinary skill to combine the well known sensor elements of Salvo for measuring the level of material and Hardway's sensor for measuring the level and composition of material in a container as the combination would yield the same predictable results of measuring the level and composition of material in a container.

**Claim 14:**

With regard to the limitation:

- ***Website has one of Main Menu, Weekly Report, Daily Report, Individual Container Report, Delivery Entry, Delivery Summary, User Administration Menu and a Container/Location Administrator Menu.***

Salvo does not specifically disclose a website with periodic reports per se, however Salvo in at least Fig.2 discloses a web page containing real-time analyzed silo information and in Fig.3 further discloses a web page containing historical trend analyzed information for a receptacle at a

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manufacturing site. Salvo in at least Column 11, lines 18-36 further discloses that the inventory management system provides real-time, analyzed information concerning inventory in easily readable formats, including, but not limited to, formats accessible over the Internet. Alternatively, the inventory information can be accessed by voice mail, email, telephone, facsimile, Internet messages, pages, and other communication modes. Salvo in at least Column 11, lines 64-67 and Column 12, lines 1-13 and Fig.3 still further discloses a link for obtaining historical trend information and in Column 12, lines 14-18 still further discloses the analyzed and historical inventory information being encrypted and stored for reference and library purposes either locally or remotely.

**Claims 7, 8, 9, 10, 11, and 12:**

With regard to the limitations:

- ***Communication link between telemetry unit, measurement unit, and First server is a wired (Ethernet) or a wireless (RF, Wireless LAN).***

Salvo in at least Column 5, lines 11-20 further discloses that the signals transmitted in the inventory management system may be but not limited to either hardwired or wireless Ethernet signals and wireless Internet and web signals as well as other wireless connections (radio signals, short-wave signals).

**Claims 22 and 23:**

With regard to the system limitations:

- ***A container with supplier's inventory at a supplier workplace;***
- ***A container with customer's inventory at a customer workplace;***

Salvo in at least Column 2, lines 57-61 discloses a system and method for vendor-managed inventory which provide information concerning inventory amounts and inventory ordering to a manufacturing site and an inventory vendor. Salvo in at least Column 3, lines 8-22 further

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discloses that the inventory management method provides inventory amounts and inventory ordering to a manufacturing site, an inventory vendor, or both.

Salvo in at least Column 9, lines 33-57 further discloses that the inventory management system 100 can be vendor controlled (vendor-managed inventory) thereby increasing interaction between the manufacturing site and vendors. Salvo in at least Column 10, lines 9-26 further discloses that the inventory management system can rely on appropriately developed inventory policies for the benefit of another inventory management system 100.

Salvo in at least Column 4, lines 12-22 discloses that the receptacles are any appropriate storage device, such as, but not limited to, a silo, storage bin, hopper, and bag, and combinations thereof.

- ***Inventory measurement instrument configured to represent amounts and composition of the inventory material associated with the supplier's container;***
- ***Inventory measurement instrument configured to represent amounts and composition of the inventory material associated with the customer's container;***
- ***Wherein the generated data signals representative of the respective compositions of the inventory material are associated with a product identifier and a container identifier.***

Salvo in at least Column 4, lines 31-44 discloses that the amount indicator used to provide signals indicative of an inventory amount includes a level sensor, weight indicator, volume analyzer, and other devices that permit determination of the amount of inventory in a receptacle.

Furthermore the indicators may also measure amount influencing variables, such as, humidity and temperature. Salvo, in at least Column 4, lines 45-58 further discloses that the indicators may include ultrasonic and ultrasound level detectors, optical sensors, laser amount sensing detection, nuclear amount sensing detectors, load cells and other devices capable of detecting amounts.

Salvo does not specifically disclose that the signals received from the measurement instruments (sensors) are directly related to the composition of the material stored in the container, however Salvo in at least Column 4, lines 31-67 discloses that the amount indicator 108 comprises a level

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sensor, a weight indicator, a volume analyzer, humidity, temperature, density of the material and other devices that permit determination of the amount of inventory in a receptacle using various technologies.

Salvo in at least Column 10, lines 48-61 discloses that the inventory management system 100 uses identification codes such as bar codes which enables identifying the location and identification of individual inventory orders stored at the manufacturing site, inventory in transit from the vendor to the manufacturing site, inventory in receptacles and inventory being processed.

However, Hardway in at least Column 1, lines 4-22 discloses a sensor for determining the ingredients ratio of a material such as cereal and food grains, crude oil, and pipeline petroleum products or by-products. Hardway in at least Column 12, lines 44-67 and Column 13, lines 1-4 further discloses that the same sensor may be used to measure the level and type of material in a tank container. Therefore, it would have been obvious, at the time of the invention, to one of ordinary skill to combine the well known sensor elements of Salvo for measuring the level of material and Hardway's sensor for measuring the level and composition of material in a container as the combination would yield the same predictable results of measuring the level and composition of material in a container.

- ***A telemetry unit in communication with each inventory measurement instrument and configured to receive and convert data signals into inventory information;***
- ***A monitoring mail server in communication with the telemetry unit and configured to receive inventory information from the telemetry unit;***
- ***A second server in communication with the monitoring mail server configured to receive and process inventory information from the mail server via an Internet connection;***

Salvo in at least Column 2, lines 57-67 and Column 3, lines 1-7 discloses an vendor-inventory managed system which has at least one storage receptacle for storing inventory, at least one amount indicator to determine the inventory in each receptacle, each amount indicator generating

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inventory amount signals representative of inventory amounts in the receptacle and a site controller 112 (Salvo, Column 4, lines 59-67 and Fig.1) that receives signals from the amount indicators and forwards the signals to the control unit 114 (Salvo, Column 5, lines 1-10) and converts the signals to determine the amount of inventory in each receptacle. Salvo in at least Column 7, lines 39-54 further discloses that the analyzed information sent by the control unit 114 is typically provided to a vendor 200 who makes inventory. The vendor 200 is able to schedule manufacture of inventory in order to meet the demands of the manufacturing site 103. The analyzed information between the vendor 200 and the control unit 114 comprises signals sent by at least one of hardwired connections and wireless connections. Salvo in at least Column 5, lines 11-20 further discloses that the signals transmitted in the inventory management system may be either hardwired or wireless Ethernet signals and wireless Internet and web signals as well as other wireless connections.

- ***Wherein a server is configured to process the generated data signals representative of the respective compositions of the inventory material to preserve use of at least one container for containing only one type or certain types of inventory material.***

The combination of Salvo and Hardway discloses the limitation of the processing of the data signals which represent the respective compositions of the inventory material as disclosed above; however Salvo and Hardway do not specifically address the limitation of preserving the use of one container for only one type or certain types of inventory material. However, Mowery in at least Column 1, lines 61-64 and Column 7, lines 34-56 discloses the use of a dedicated fleet of delivery vehicles to eliminate the tank truck washings and the associated waste disposal typical of non-dedicated fleets while maintaining a minimum level of inventory in the storage containers. Therefore, it would have been obvious, at the time of the invention, to one of ordinary skill to modify the Salvo/Hardway combination with Mowery's dedicated fleet of delivery vehicles and to further modify Mowery to include the storage containers, with the motivation to minimize the creation of waste due to vehicle and container washing, which must be properly disposed.

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- ***A wireless communication link between the measurements and the telemetry unit, wherein the wireless communication link comprised at least one of radio frequency, IEEE 802.11 wireless LAN or Bluetooth technology.***

Salvo in at least Column 5, lines 11-20 further discloses that the signals transmitted in the inventory management system may be but not limited to either hardwired or wireless Ethernet signals and wireless Internet and web signals as well as other wireless connections (radio signals, short-wave signals).

8. **Claims 15-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Salvo as applied to claim 1 above, and further in view of SOAP (P1-P4) (<http://xml.coverpages.org/soap.html>).

**Claims 15, 16, 17, and 18:**

With regard to the limitations:

- ***One of the servers (mail or inventory) is configured to process one message and notification:***
- ***Notification is one of Delivery, Inventory Level, or System Alert.***
- ***Message and Notification are XML messages including Inventory information.***
- ***Notification is a SOAP message, including Inventory Information.***

Salvo does not disclose the use of XML or SOAP messages per se. However, Salvo in at least Column 7, lines 55-67 discloses that the analyzed information is typically accessible anywhere and at any time, for example by phone, voice mail, fax, overnight and regular mail, courier and over the Internet. Salvo in at least Column 6, lines 1-6 discloses that the control unit may incorporate a "JAVA" virtual machine that links a server through the Internet for communication purposes. Salvo in at least Column 8, lines 5-25 discloses an alert generated by the control unit in response to the real-time pricing feature exceeding a limit. Salvo in at least Column 8, lines 51-59 further discloses the control unit and service center sending alerts to plant management at the manufacturing site and vendors when a critical event occurs such as shortages in inventory.

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The alerts are communicated via regular mail, email, telephone, pagers, facsimile, Internet messages and similar communications. It would have obvious, at the time of the invention, to one of ordinary skill in the art to modify Salvo by combining XML and SOAP as the messaging protocol since Salvo sends messages to various types of devices which use various formatting standards. The use of XML and SOAP allows for messages to be sent in a plain format where the message will be formatted based on the end message receiving terminal's capability.

#### **Conclusion**

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:
- Paglione, US 5,051,921 A**, teaches an improved liquid level and composition sensor for liquids in a tank.
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL DANNEMAN whose telephone number is (571)270-1863. The examiner can normally be reached on Mon.-Thurs. 6AM-5PM Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Florian Zeender can be reached on 571-272-6790. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Paul Danneman/

Examiner, Art Unit 3627

3 March 2010

/F. Ryan Zeender/

Supervisory Patent Examiner, Art Unit 3627